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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,692	05/14/2001	Naoki Abe	040373/0303	6572
22428 7590 03/22/2007 FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			EXAMINER VAN DOREN, BETH	
			ART UNIT 3623	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/853,692

Applicant(s)

ABE ET AL.

Examiner

Beth Van Doren

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a non-final office action in response to communications received 12/18/2006. Claims 1 and 14 have been amended. Claims 15-18 have been added. Claims 1-2 and 14-18 are now pending in this application.

Examiner Note

2. Examiner notes that on page 9 of the remarks, Applicant states that claims 2-13 have been withdrawn from consideration. However, in the claim listing, claim 2 is listed as previously presented. Therefore, Examiner has construed that the statement on page 9 of the remarks is in error and has addressed claim 2 as pending below. Clarification is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 recites “determining a next time interval until a next point in time, wherein the next time interval is computed to be smaller than a most recent time interval that is defined as a time between a current point in time and a most recent point in time”. This language is vague and indefinite as it is not clear what is specifically being claimed. First, it is not clear what the distinction is between a current point in time and a most recent point in time. Thus, it is not clear as to what is the most recent time interval. Since it is not clear as to what is the most recent time interval, the relationship between

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the next time interval and the most recent time interval is also unclear. Clarification is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen and Chen ("The Optimal Penetration Pricing Strategy Model under the Dynamic Demand Function") in view of Berkowitz et al. (*Marketing*).

As per claim 1, Chen and Chen teaches at each point in time, carrying out marketing for a fixed time intervals using prices that vary from an optimal price estimate at that time; comparing profits obtained as a result of said marketing; updating the optimal price estimate at time in question in a direction of price at which greater profit was obtained; and repeating said marketing step, said comparison step, and said updating step (See page 144, where the relation between price, quantity, and demand is analyzed. At higher prices, number of purchases are lower, where at lower prices, the number of purchases are higher. See table 2, page 147, where at different time periods the price is changed which effects product demand. The demand inherently correlates to profit made. See also pages 148-9, where penetration pricing strategy is used, in order to increase sales quantity a manufacturer keeps the unit selling price of a product equal to its cost during an introduction stage, then sensitivity analysis is used to analyze optimal solutions to see

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effects of variation of parameters on optimal pricing and total profit. Finally, see page 150, where variation in promotion period and unit cost affects manufacturers decision making about the optimal pricing of a product). However, Chen and Chen do not expressly disclose a first price that is one step size higher than and a second price that is one said step size lower than the optimal price at each point in time (i.e. raising and lowering the price at the time point).

Berkowitz et al. teaches different price points being offered to customers at the same point in time, such as different fares being offered on the web and different prices being charged by retailers, wholesalers, and manufacturers (See pages 346-8 and 352-3).

Both Berkowitz et al. and Chen and Chen are concerned with pricing associated with a product or service. It would have been obvious to one of ordinary skill in the art at the time of the invention to include both a first price that is higher than and a second price that is lower than the optimal price at a time point in Chen and Chen in order to more accurately calculate the change in demand caused by increasing or decreasing prices, which therefore allows a user to calculate their optimal profit.

As per claim 2, Chen and Chen teaches wherein said step size is determined by raising a number of past marketing time intervals to minus α power, where α is a positive number less than 1 (See pages 145 and 150, wherein the time interval or promotional period is a decreasing function of time t . Note, in applicants specification, I to the minus alpha power is equated to delta, which is a decreasing function of the trial number).

As per claims 14-15, Chen and Chen teach all of the limitations as applied above to claim 1. However, Chen and Chen does not expressly disclose that a first set of web users with marketing over the Internet at the first price that is one step size higher than

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the optimal price estimate at that time or a second set of web users with marketing over the Internet at the second price that is one step lower than the optimal price estimate at that time, wherein no web user is in both the first set of web users and the second set of web users and the first set of web users and the second set of web users are provided with the first price and the second price at a same instant in time.

Berkowitz et al. teaches different price points being offered to customers at the same point in time, such as different fares being offered to groups of users on the internet/web (See pages 346-8 and 352-3, and figure 13-6, where different fares for the same flight are offered to different users on the web).

Both Berkowitz et al. and Chen and Chen are concerned with pricing associated with a product or service. It would have been obvious to one of ordinary skill in the art at the time of the invention to include both a first price that is higher than and a second price that is lower than the optimal price at a time point in Chen and Chen in order to more accurately calculate the change in demand caused by increasing or decreasing prices, which therefore allows a user to calculate their optimal profit.

As per claim 16, Chen and Chen does not expressly disclose and Berkowitz et al. discloses teaches wherein the first set of web users includes more than one web user, and wherein the second set of web users includes more than one web user (See pages 346-8 and 352-3).

Both Berkowitz et al. and Chen and Chen are concerned with pricing associated with a product or service. It would have been obvious to one of ordinary skill in the art at the time of the invention to include both a first price that is higher than and a second price that is lower than the optimal price at a time point in Chen and Chen in order to more

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accurately calculate the change in demand caused by increasing or decreasing prices, which therefore allows a user to calculate their optimal profit.

As per claim 17, Chen and Chen does not expressly disclose and Berkowitz et al. discloses setting a maximum allowable price (See pages 346-348, wherein a maximum markup is set);

Setting a minimum allowable price (See pages 344-346, wherein the minimum price is set at cost; and

Clamping the price at each respective point in time such that the price is not greater than the maximum allowable price and not less than the minimum allowable price (See pages 346-349, wherein the price is set between the maximum allowable price (based on the allowable markup) and the cost price (minimum)).

Both Berkowitz et al. and Chen and Chen are concerned with pricing associated with a product or service. It would have been obvious to one of ordinary skill in the art at the time of the invention to include both a minimum and maximum allowable price, between which should be charged, in order to more accurately ensure that costs for producing the product are met as well as a target profit. See pages 344 and 348-9, of Berkowitz et al.

As per claim 18, Chen and Chen discloses determining a next time interval until a next point in time, wherein the next time interval is computed to be smaller than a most recent time interval that is defined as a time between a current point in time and a most recent point in time (See also pages 148-9, wherein different time intervals are used).

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Response to Arguments

7. Applicant's arguments with respect to claims 1-2 and 14-18 have been considered but are moot in view of the new grounds of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Phillips et al (U.S. 7,110,960) teaches market segmentation and charging different prices to different buyer segments.

Levenstein (U.S. 6,226,625) teaches a dynamic pricing system that calculates price parameters for goods and services at time intervals.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is 571-272-6737. The examiner can normally be reached on M-F, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

lwd

bvd

March 16, 2007

Beth Van Dora
AU 3623
Patent Examiner